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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,884	08/28/2001	Joan Manuel Garcia	60003206-1	7849

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EXAMINER

NGUYEN, LAM S

ART UNIT PAPER NUMBER

2853

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,884

Applicant(s)

GARCIA ET AL.

Examiner

LAM S NGUYEN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 10-12, 14, 16, 17, 19, 20 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 9, 13, 15, 18 and 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

This application has been filed with informal drawings: FIG. 11 and FIG. 12 which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Objections

1. Claims 20 and 21 are objected to because of the following informalities: Claims 20 and 21 are identical to claims 17 and 18, respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5, 10, 11, 14 are rejected under 35 U.S.C. 102(b) as being obvious by Haselby et al. (US 4916638).

Haselby et al. discloses a diagnostic method for visual detection media advance calibration in an ink-jet printing comprising:

printing different areas of a diagnostic at different passes (FIG. 15) of one or more ink-jet printhead controlled amount of media advances between the passes, to accumulate media advance error between the printing of the different areas (column 2, line 1-7); and

examining the diagnostic pattern to determine whether the accumulated

media advance error is sufficiently objectionable to take corrective action (column 2, line 1-17, and Abstract).

Referring to claims 2 and 11: wherein said printing different areas comprises: printing a first area comprising a first set of pixels printed during a first pass (FIG. 11); conducting a plurality of incrementally media advances (FIG. 12-14); printing a further area comprising a second set of pixels printed during a further pass (FIG. 15), wherein media advance errors resulting from said plurality of media advances are accumulated between printing said first area and printing said further area.

Referring to claims 5 and 14: the step of examining the diagnostic pattern is conducted by an optical sensor (column 4, line 27-30, and Abstract)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 19, 20 are rejected under 35 U.S.C. 102(e) as being obvious by Maeda et al. (US 6334659).

With assumption that claim 20 is depend on claim 19, the rejection is made as following:

Maeda et al. discloses a multi-pass diagnostic print mode mask for visual detection of poor media advance calibration in an ink jet printing system including a printhead having a nozzle array (FIG. 7A), wherein a plurality of carriage passes are employed to print the area subtended by a printhead nozzle array (FIG. 7A), the diagnostic print mode mask comprising a rectilinear grid of pixels (FIG. 10), with each pixel location having a number associated therewith (FIG. 10), the number representing the pass in which the pixel will be printed, and wherein said different areas include a first set of pixels on a row of said grid, and a second set of pixels on said row (FIG. 10C: the #1 pixel set is on the same row with the #3 pixel set), and wherein said first set of pixels is printed on a different pass than said second set of pixels is printed (FIG. 10C: the #1 pixel set and #3 pixel set are printed on the different passes), and said diagnostic print mode mask defines that the first $w/2$ pixels in the row are printed in the same pass (a_i), and the last $w/2$ pixels in the row are printed in another pass (b_i).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 7, 8, 12, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haselby et al. (US 4916638) in view of Maeda et al. (US 6334659).

Haselby discloses the claimed invention as discussed above except that wherein said step of printing different areas of a diagnostic plot includes: applying a diagnostic

multi-pass print mode mask, wherein a plurality of carriage passes are employed to print the area subtended by a printhead nozzle array, the diagnostic print mode mask comprising a rectilinear grid of pixels, with each pixel location having a number associated therewith, the number representing the pass in which the pixel will be printed, and wherein said different areas nominally aligned along a horizontal line include a first set of pixels on a row of said grid, and a second set of pixels on said row, and wherein said first set of pixels is printed on a different pass than said second set of pixels is printed, and said diagnostic print mode mask defines that the first $w/2$ pixels in the row are printed in the same pass (a_i), and the last $w/2$ pixels in the row are printed in another pass (b_i).

However, Maeda et al. discloses that wherein said step of printing different areas of a diagnostic plot includes: applying a diagnostic multi-pass print mode mask, wherein a plurality of carriage passes are employed to print the area subtended by a printhead nozzle array (FIG. 7A), the diagnostic print mode mask comprising a rectilinear grid of pixels (FIG. 10), with each pixel location having a number associated therewith (FIG. 10), the number representing the pass in which the pixel will be printed, and wherein said different areas nominally aligned along a horizontal line (FIG. 10C: areas printed by #1 pixel and #3 pixel are aligned along a horizontal line) include a first set of pixels on a row of said grid, and a second set of pixels on said row (FIG. 10C: the #1 pixel set is on the same row with the #3 pixel set), and wherein said first set of pixels is printed on a different pass than said second set of pixels is printed (FIG. 10C: the #1 pixel set and #3 pixel set are printed on the different passes), and said diagnostic print mode mask defines that the first $w/2$ pixels in the row are printed in the same pass (a_i), and the last $w/2$ pixels

in the row are printed in another pass (b_i) (FIG. 10C: Two #1 pixels are printed in the first pass, two #3 pixels are printed in another pass).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to include the applying of a diagnostic multi-pass print mode mask as designed by Maeda et al. into the design of Haselby et al. because this reduces the formed bind pitch to less than paper transport width without increasing the number of scans; thus, the banding artifacts are imperceptible as taught by Maeda et al. (column 4, line 4-10).

Allowable Subject Matter

5. Claims 4, 6, 9, 13, 15, 18, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 22 is allowed.

The closest references Haselby et al. (US 4916638) and Maeda et al. (US 6334659) do not disclose that the diagnostic print mode mask including a row wherein said first w/2 pixels are printed in a first pass, and said last w/2 pixels are printed in a last pass of said plurality of passes, said step of examining the diagnostic pattern is conducted visually by a user, and an initial step of checking for printhead health and taking any corrective needed action prior to printing said diagnostic pattern. Therefore, the limitations of these claims are not disclosed in the prior arts.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S NGUYEN whose telephone number is (703)305-3342. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BARLOW can be reached on (703)308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

LN

June 14, 2002


ANH T.N. VO
PRIMARY EXAMINER
06/14/02